

TROPICAL RAINFALL MEASURING MISSION

May 1, 2000 - May 7, 2000

DOY 122 - 128

Day of Mission 886 - 892

TRMM MISSION OPERATIONS

- TRMM is flying in the +X Forward direction as of 00-111, at 12:52:13z.
- Yaw maneuver #41 is scheduled for May 19th (00-140).
- Delta-V maneuver #194 is scheduled for May 16th (00-137), using the LBS thrusters.
- The Beta angle range for 00-136 through 00-142 is 20.6° to °.
- The next Monthly Status Review is scheduled for June 7th (00-159).
- The next CCB meeting is scheduled for May 15th (00-136).

TRMM SUBSYSTEM OPERATIONS

Attitude Control System (ACS)

Delta-V maneuver #190 was successfully conducted on 00-124 at 15:53:16z and 16:39:01z for durations of 42.500 and 32.375 seconds respectively, using the LBS thrusters. The off-modulation of the -Yaw thruster (#1) for burn 1 was 8.5% (91.5% on time). The off-modulation of the +Pitch thruster (#2) for burn 1 and 2 was 24.1% and 22.4% (75.9% and 77.6% on time). The remaining fuel is 585.129 kg, and the final apogee and perigee height is 354.67 km x 347.57 km.

Delta-V maneuver #191 was successfully conducted on 00-127 at 15:49:03z and 16:34:45z for durations of 31.500 and 19.500 seconds respectively, using the LBS thrusters. There was no off-modulation of the -Yaw thruster (#1). The off-modulation of the +Pitch thruster (#2) for burn 1 and 2 was 21.8% and 18.6% (78.2% and 81.4% on time). The remaining fuel is 583.892 kg, and the final apogee and perigee height is 354.79 km x 347.53 km.

The ESA experienced Sun interference in quadrants 1 and 3 on 00-122 through 00-128 and Moon interference in quadrants 1 and 3 on 00-123 through 00-128 with periods of overlapping interference on 00-123 through 00-126. ACS performed nominally during the transitions between 2,3 and 4 head control.

ACS table #85 (EPV continuity limits) was copied to EEPROM on 00-125. This will make recovery operations easier after widening the limits for an EPV update failure and if there is a cold start.

Flight Data System (FDS)/Command & Data Handling (C&DH)

The frequency standard offset was adjusted by 12 counts on 00-125 at 15:42:05z and the new value is x'796' with a current drift rate of -1.1 μ s/hr. The UTCF was adjusted -895 μ s on 00-125 at 15:38:08z and is currently 31535996.843867 seconds with a current drift value of +87 μ s.

Q-channel restarts occurred on 00-124 at 02:08:51z, on 00-126 at 11:11:54z and 23:05:09z, 00-127 at 21:25:51, and 00-128 at 02:09:47.

EDAC multi-bit error occurred on 00-125 at 05:28:14z.

A framer error occurred on the S/C processor on 00-125 at 13:04:33z.

Invalid Stream Id occurred from XS on 00-127 at 19:16:05z due to VIRS.

Reaction Control Subsystem (RCS)

The RCS subsystem performed nominally during this period. See the ACS section for specific Delta-V information.

Power Subsystem

The Power subsystem is operating nominally.

Electrical Subsystem

The Electrical subsystem operated nominally during this period.

Thermal Subsystem

The Thermal subsystem operated nominally during this period.

Deployables Subsystem

The Deployables subsystem performed nominally during this period.

RF/Communications Subsystem

The RF/Communications subsystem performed nominally during this period.

There was a generic late aquisition on the 171 15:56z event on 00-122 (Late Acq #56). All data was recovered.

SPACECRAFT INSTRUMENTS

CERES

The next Internal calibration is scheduled for 00-131.

No tests were performed this week.

LIS

LIS performed nominally during this time period.

PR

PR performed nominally during this time period.

The list of Internal Calibration times over Australia in which PR was not radiating is below:

2000/122:01:14:56 - 01:18:19z
2000/122:07:44:21 - 07:45:43z
2000/122:09:18:25 - 09:20:31z
2000/123:08:07:00 - 08:09:11z
2000/124:00:24:39 - 00:29:43z
2000/124:08:29:53 - 08:31:30z
2000/125:07:17:56 - 07:20:05z
2000/125:23:36:08 - 23:40:06z
2000/126:06:06:29 - 06:08:43z
2000/127:06:29:11 - 06:31:19z
2000/128:05:17:48 - 05:20:01z
2000/128:21:37:47 - 21:40:22z

TMI

TMI performed nominally during this time period.

VIRS

VIRS performed nominally during this time period.

GROUND SYSTEM

Testing of MOC release 8.1 continues on string-3.

During the 00:54z event on 00-124, both workstations locked-up and the front end Data Capture Card overflowed (ER#174). The event was completed on string-2. Prime realtime operations returned to string-1 after a reboot.

Event Reports

ER #174: String-1 Workstations Lock-up (See Ground System section).

Generic Late Acquisition Reports (for TTRs 19639)

#56: 00/122-15:56z; 171/SSA1; 42 seconds.

New Anomaly

No new Anomalies occurred during this period.

Recurring Open Anomalies

No Open Anomalies recurred during this period.

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